

FEATURES

- Tension and/or Compression
- Small design easy to mount
- Wide temperature range in option
- Amplifier Integrated optional
- Easy to customize signal and design

APPLICATIONS

- Dynamic strain cylinder regulation
- Miniature press-fit device
- Fatigue test benches
- Robotics regulation
- Small size actuators

XFTC300

Miniature Load Cell

SPECIFICATIONS

- Ranges 0-2N to 0-2kN [0.45 lbf to 450 lbf]
- High Stiffness
- Threaded Male Mechanical Fitting
- Linearity <0,5% FS

The **XFTC300** series has been specifically developed to measure tension and/or compression in static and dynamic applications. The miniature size and light-weight facilitate testing where these conditions are necessary.

The sensing element is fitted with a fully temperature compensated Wheatstone bridge equipped with high stability micro-machined silicon strain gages. The use of silicon strain gages optimizes the load cell's performance at low ranges and frequencies.

For sensors with a range of between 2 and 2kN, a high-level output model is available. With two male threads, the **XFTC300** is easily installed in industrial or OEM applications. A strain relief spring strengthens the cable output.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

PERFORMANCE SPECIFICATIONS (typical values at temperature 23°C)

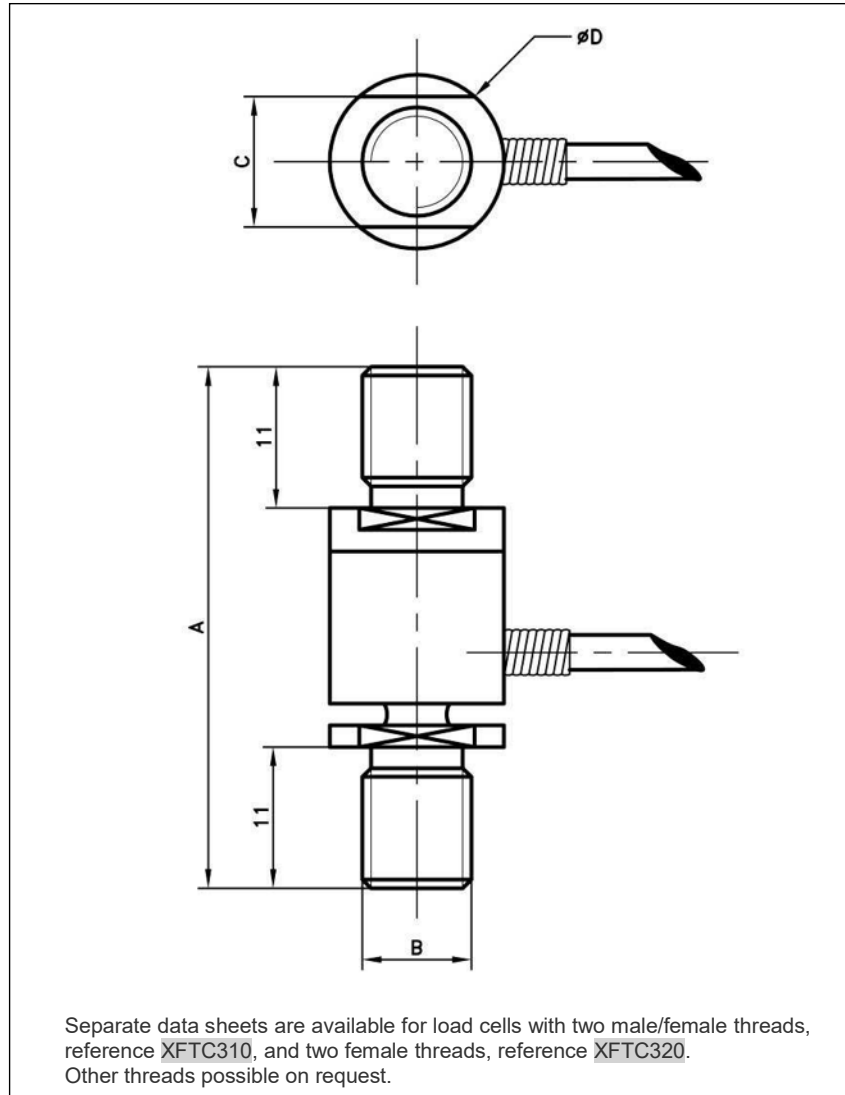
Ranges (FS) (N)	2	5	10	20	50	100	200	500	1k	2k
Ranges (lbf)	0.45	1.12	2.25	4.50	11.24	22.48	44.96	112.4	224.8	449.6
Material	Aluminium						Stainless Steel			
Stiffness (N/m)	2.6E+05	7.2E+05	1.1E+06	2.1E+06	2.7E+06	2.1E+06	5.1E+06	9.1E+07	1.4E+08	2.6E+08
Stiffness (lbf/ft)	1.8E+04	4.9E+04	7.7E+04	1.4E+05	1.9E+05	1.4E+05	3.5E+05	6.2E+06	9.6E+06	1.8E+07
Sensitivity (FSO) (version Standard)	±100 mV									
Sensitivity (FSO) (version A1)	Ranges not available							±2Vdc ±0.2V		
Sensitivity (FSO) (version A2)	Ranges not available							±5Vdc ±0.25V		
Input Impedance (version standard)	1500 ohms			1000 ohms				1500 ohms		
Output Impedance (version standard)	500 ohms			1000 ohms				500 ohms		
Consumption (version A1 A2)	< 30 mA									
Output Impedance (version A1 A2)	1 kohms max									

Version	Standard	A1	A2
Power supply	10Vcc	10Vdc to 30Vdc	±12Vdc to ±18Vdc
Offset	<±10 mV	2.5Vdc ±0.2V	0Vdc ±0.25V
Overrange Without Damage	2x FS		
Overrange Without Destruction	3x FS		
Linearity	< ±0.5% FS		
Hysteresis	< ±0.5% FS		
Operating Temperature Range (OTR)	-40°C to +120°C (-40°F to 250°F)		
Compensated Temperature Range (CTR)	0°C to +60°C (32°F to 140°F)		
Thermal Zero Shift in CTR	< 2% FS/50°C		
Thermal Sensitivity Shift in CTR	< 2%/50°C		
Insulation	> 100 Mohms		
Protection Index	IP50		

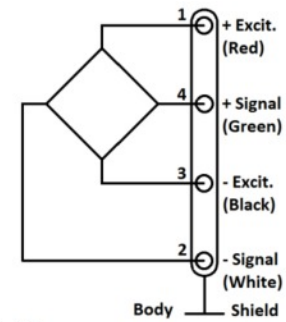
Notes

1. Signal goes positive in tension with standard wiring configuration. Custom outputs available on request
2. A1 and A2 options are only available for ranges 500N, 1kN and 2kN
3. Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
4. Material: Body in stainless steel or aluminum alloy depending on F.S.
5. Output impedance standard, available <100Ω on request.
6. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

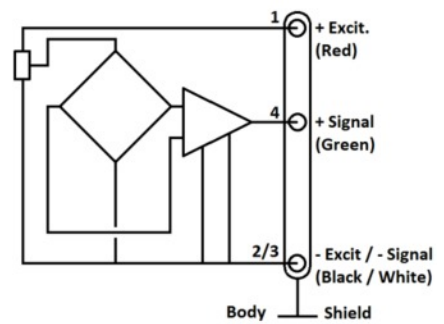
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



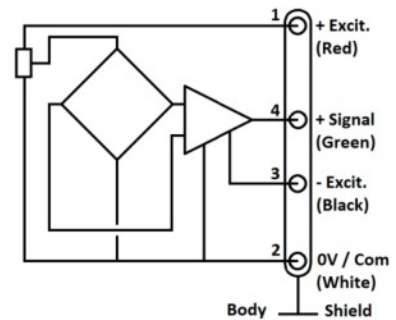
Wiring Schematic



Version -A1



Version -A2



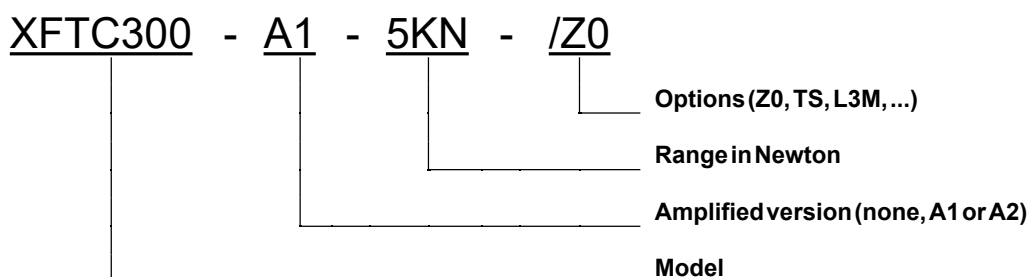
Dimensions in mm [inch]

Range in N	2 - 5 - 10 - 20 - 50	100 - 200	500 - 1000	2000
A	36 [1.42]	36 [1.42]	46 [1.81]	46 [1.81]
B (Thread)	M5	M5	M10	M10
C	8 [0.31]	8 [0.31]	12 [0.47]	16 [0.63]
$\varnothing D$	10 [0.39]	10 [0.39]	16 [0.63]	20 [0.79]

OPTIONS

Z0	CTR -40°C to +20°C (-40°F to 68°F)
Z04	CTR -40°C to +90°C (-40°F to 194°F)
Z1	CTR -20°C to +40°C (-4°F to 104°F)
Z3	CTR +20°C to +80°C (68°F to 176°F)
Z35	CTR +20°C to +120°C (68°F to 248°F)
Z36	CTR +20 to +150°C (68°F to 302°F) (OTR -40°C à +150°C (-40°F to 302°F)) - Available only on version standard 200N / 500N / 1kN / 2kN
TS	Tolerance on signal $\leq \pm 2\%$ FS only on version A1 / A2
L00M	Special cable length, replace "00" with total length in meter

ORDERING INFO



The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.